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MAP\$(MAPPING-INFORMATION).P29-P91,P93-P96,P24-P28,P21-P23,P1-P19,P20-P20.

### Search Results -

Terms	Documents
business same concept same map\$ same system	31

Database:

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### Search History

DATE: Wednesday, April 10, 2002 [Printable Copy](#) [Create Case](#)

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>			
<u>L24</u>	business same concept same map\$ same system	31	<u>L24</u>
<u>L23</u>	L22 and dictionary	2	<u>L23</u>
<u>L22</u>	L21 and database	25	<u>L22</u>
<u>L21</u>	L20 and views	29	<u>L21</u>
<u>L20</u>	L19 and elements	35	<u>L20</u>
<u>L19</u>	map\$ same business same concepts	50	<u>L19</u>
<u>L18</u>	L1 and business same schema	20	<u>L18</u>
<u>L17</u>	L1 and business near schema	2	<u>L17</u>
<u>L16</u>	L15 and elements	178	<u>L16</u>
<u>L15</u>	L14 and map\$	228	<u>L15</u>
<u>L14</u>	l1 and business	528	<u>L14</u>
<u>L13</u>	l1 and l9	0	<u>L13</u>
<u>L12</u>	l4 and l9	0	<u>L12</u>
<u>L11</u>	l8 and l8	16	<u>L11</u>
<u>L10</u>	l8 and l9	0	<u>L10</u>
<u>L9</u>	5802515.pn.	3	<u>L9</u>
<u>L8</u>	L7 and business	16	<u>L8</u>
<u>L7</u>	L4 and dictionary	19	<u>L7</u>
<u>L6</u>	L4 and dictionary same business same concepts	0	<u>L6</u>
<u>L5</u>	L4 and business same concepts	13	<u>L5</u>
<u>L4</u>	L1 and on-line near analytical near process\$ or olap	220	<u>L4</u>
<u>L3</u>	L1 and on-line near analytical near process\$	26	<u>L3</u>
<u>L2</u>	L1 and on-line and analytical near process\$	30	<u>L2</u>
<u>L1</u>	datamining or data with mining	1263	<u>L1</u>

END OF SEARCH HISTORY

**WEST**

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Print

L24: Entry 10 of 31

File: USPT

May 5, 1998

US-PAT-NO: 5748188

DOCUMENT-IDENTIFIER: US 5748188 A

TITLE: Hypertext markup language (HTML) extensions for graphical reporting over an internet

DATE-ISSUED: May 5, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hu; Yih-Shiuan	Alpharetta	GA		
Anand; Tejwansh S.	Roswell	GA		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
NCR Corporation	Dayton	OH			02

APPL-NO: 8/ 742003 [PALM]  
DATE FILED: October 31, 1996

## PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS This patent application is a continuation-in-part of co-pending U.S. patent application Ser. No. 08/542,266, filed Oct. 12, 1995, and entitled "System and Method For Generating Reports From a Computer Database". This patent application is also related to co-pending U.S. patent application Ser. No. 08/742,007, filed Oct. 31, 1996, and entitled "System and Method For Segmenting a Database Based Upon Data Attributes", and Ser. No. 08/742,006, filed Oct. 31, 1996, and entitled "System And Method For Performing Intelligent Analysis Of A Computer Database".

INT-CL: [6] G06 F 15/00

US-CL-ISSUED: 345/326; 395/200.03, 395/200.36, 707/101, 707/104

US-CL-CURRENT: 345/853; 707/101, 707/104.1, 707/513, 707/526, 709/206, 709/218

FIELD-OF-SEARCH: 707/501, 707/513, 707/515, 707/517, 707/520, 707/522, 707/104, 707/101, 707/102, 707/204, 395/200.3, 395/200.33, 395/200.36, 395/200.48, 395/200.49, 395/200.68, 395/200.76, 345/326

## PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5088052</u>	February 1992	Spielman et al.	345/346
<input type="checkbox"/>	<u>5355472</u>	October 1994	Lewis	395/500
<input type="checkbox"/>	<u>5404506</u>	April 1995	Fujisawa et al.	707/4
<input type="checkbox"/>	<u>5414838</u>	May 1995	Kolton et al.	707/104
<input type="checkbox"/>	<u>5455945</u>	October 1995	VanderDrift	707/2
<input type="checkbox"/>	<u>5471611</u>	November 1995	McGregor	395/51
<input type="checkbox"/>	<u>5537590</u>	July 1996	Amado	395/50
<input type="checkbox"/>	<u>5544298</u>	August 1996	Kanavy et al.	345/342

## OTHER PUBLICATIONS

Korth and Silberschatz, "Database System Concepts" 2/E, McGraw-Hill Inc., pp. 97-98.

ART-UNIT: 273

PRIMARY-EXAMINER: Kim; Matthew M.

ASSISTANT-EXAMINER: Huynh; Ba

ATTY-AGENT-FIRM: Kirsch; Gregory J.

## ABSTRACT:

A hypertext data processing system wherein graphical data is sent from a server to a client computer using extensions to the Hypertext Markup Language (HTML). The client computer parses the graphical data and formulates an object representative of the graph to display. The object is passed to a graph server which displays the graph.

6 Claims, 31 Drawing figures

**WEST****Freeform Search**

**Database:** US Patents Full-Text Database  
US Pre-Grant Publication Full-Text Database  
JPO Abstracts Database  
EPO Abstracts Database  
Derwent World Patents Index  
IBM Technical Disclosure Bulletins

**Term:**

**Display:**  **Documents in Display Format:**  **Starting with Number**

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**Search History**

**DATE:** Wednesday, April 10, 2002   [Printable Copy](#)   [Create Case](#)

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side by side

Hit Count   Set Name  
result set

*DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR*

<u>L5</u>	l4 and on-line near analytical near process\$ or olap	220	<u>L5</u>
<u>L4</u>	datamining or data with mining	1263	<u>L4</u>
<u>L3</u>	olap and datamining	0	<u>L3</u>
<u>L2</u>	5802515.pn.	3	<u>L2</u>
<u>L1</u>	4490811.pn.	3	<u>L1</u>

END OF SEARCH HISTORY

**WEST****End of Result Set**☐ **Generate Collection** **Print**

L8: Entry 16 of 16

File: USPT

Jun 16, 1998

US-PAT-NO: 5767854

DOCUMENT-IDENTIFIER: US 5767854 A

TITLE: Multidimensional data display and manipulation system and methods for using same

DATE-ISSUED: June 16, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anwar; Mohammed S.	Houston	TX	77055	

APPL-NO: 8/ 721899 [PALM]

DATE FILED: September 27, 1996

INT-CL: [6] G06 F 3/14

US-CL-ISSUED: 345/355; 345/419

US-CL-CURRENT: 345/848; 345/419

FIELD-OF-SEARCH: 345/339, 345/349, 345/355, 345/440, 345/419, 345/329, 345/334, 707/100, 707/101, 707/102

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

**Search Selected****Search ALL**

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5295243</u>	March 1994	Robertson et al.	345/419
<input type="checkbox"/>	<u>5414802</u>	May 1995	Takamura	345/419
<input type="checkbox"/>	<u>5517602</u>	May 1996	Natarajan	345/419
<input type="checkbox"/>	<u>5602978</u>	February 1997	Lastinger	345/419
<input type="checkbox"/>	<u>5666472</u>	September 1997	Huddy	345/419

ART-UNIT: 273

PRIMARY-EXAMINER: Bayerl; Raymond J.

ASSISTANT-EXAMINER: Nguyen; Cao H.

ATTY-AGENT-FIRM: Strozier; Robert W. Gilbreth; J. M. (Mark) Gilbreth &amp; Strozier, PC

## ABSTRACT:

This invention discloses a user interface and data management procedures for the efficient display, manipulation and analysis of multi attributed data or data amenable to multidimensional display, manipulation and management. The invention is centered on the construction and use of data carousels comprising one or more n-gons where the each n-gon can be a layered n-gon at solid or each side of each n-gon can be a single face of an embedded n-gon.

10 Claims, 39 Drawing figures

**WEST**☐ **Generate Collection** **Print**

L8: Entry 8 of 16

File: USPT

Apr 3, 2001

US-PAT-NO: 6212524

DOCUMENT-IDENTIFIER: US 6212524 B1

TITLE: Method and apparatus for creating and populating a datamart

DATE-ISSUED: April 3, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weissman; Craig David	Belmont	CA		
Walsh; Gregory Vincent	Cupertino	CA		
Slater, Jr.; Lynn Randolph	Fremont	CA		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
E.piphany, Inc.	San Mateo	CA			02

APPL-NO: 9/ 073752 [PALM]

DATE FILED: May 6, 1998

## PARENT-CASE:

CROSS REFERENCES TO RELATED APPLICATIONS This application relates to the following group of applications. Each application in the group relates to, and incorporates by reference, each other application in the group. The invention of each application is assigned to the assignee of this invention. The group of applications includes the following. U.S. patent application Ser. No. 09/385,119, entitled "Method and Apparatus for Creating a Well-Formed Database System Using a Computer," filed Aug. 27, 1999, and having inventors Craig David Weissman, Greg Vincent Walsh and Eliot Leonard Wegbreit. U.S. patent application Ser. No. 09/073,752, entitled "Method and Apparatus for Creating and Populating a Datamart," filed May 6, 1998, and having inventors Craig David Weissman, Greg Vincent Walsh and Lynn Randolph Slater, Jr. U.S. patent application Ser. No. 09/073,733, entitled "Method and Apparatus for Creating Aggregates for Use in a Datamart," filed May 6, 1998, and having inventors Allon Rauer, Gregory Vincent Walsh, John P. McCaskey, Craig David Weissman and Jeremy A. Rassen. U.S. patent application Ser. No. 09/073,753, entitled "Method and Apparatus for Creating a Datamart and for Creating a Query Structure for the Datamart," filed May 6, 1998, and having inventors Jeremy A. Rassen, Emile Litvak, abhi a. shelat, John P. McCaskey and Allon Rauer.

INT-CL: [7] G06 F 17/30

US-CL-ISSUED: 707/101; 707/3

US-CL-CURRENT: 707/101; 707/3

FIELD-OF-SEARCH: 707/1-10, 707/100-104, 707/200-206

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

**Search Selected****Search ALL**



	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5386556</u>	January 1995	Hedin et al.	707/4
<input type="checkbox"/>	<u>5550971</u>	August 1996	Brunner et al.	707/3
<input type="checkbox"/>	<u>5659724</u>	August 1997	Borgida et al.	707/3
<input type="checkbox"/>	<u>5675785</u>	October 1997	Hall et al.	707/102
<input type="checkbox"/>	<u>5806060</u>	September 1998	Borgida et al.	707/3
<input type="checkbox"/>	<u>5995958</u>	November 1999	Xu	707/3

## OTHER PUBLICATIONS

Kimball, R., "The Data Warehouse Toolkit", (1996) John-Wiley & Sons, Inc., 388 pages (includes CD ROM).

Chawathe, S. et al., "Change Detection in Hierarchically Structured Information", SIGMOD Record, vol. 25, No. 2, Jun. 1996, pp. 493-504.

Chawathe, S. et al., "Meaningful Change Detection in Structured Data", Proceedings of the 1997 ACM SIGMOD International Conference, ACM Press, 1997, pp. 26-37.

Labio, W. et al., "Efficient Snapshot Differential Algorithms for Data Warehousing", Department of Computer Science, Stanford University, (1996), pp. 1-13.

Wiener, J. et al., "A System Prototype for Warehouse View Maintenance", The Workshop on Materialized Views, pp. 26-33, Montreal, Canada, Jun. 1996.

Kawaguchi, A. et al., "Concurrency Control Theory for Deferred Materialized Views", Database Theory-ICDT '97, Proceedings of the 6th International Conference, Delphi, Greece, Jan. 1997, pp. 306-320.

Zhuge, Y. et al., "Consistency Algorithms for Multi-Source Warehouse View Maintenance", Distributed and Parallel Databases, vol. 6, pp. 7-40 (1998), Kluwer Academic Publishers.

Zhuge, Y. et al., "View Maintenance in a Warehousing Environment", SIGMOD Record, vol. 24, No. 2, Jun. 1995, pp. 316-327.

Widom, J., "Research Problems in Data Warehousing", Proc. of 4th Int'l Conference on Information and Knowledge Management (CIKM), Nov. 1995, 6 pages.

Yang, J. et al., "Maintaining Temporal Views Over Non-Historical Information Sources For Data Warehousing", Advances in Database Technology--EDBT '98, Proceedings of the 6th International Conference on Extending Database Technology, Valencia, Spain, Mar. 1998, pp. 389-403.

Quass, D., "Maintenance Expressions for Views with Aggregation", Proceedings of the 21st International Conference on Very Large Data Bases, IEEE, Zurich, Switzerland, (Sep. 1995), 9 pages.

Mumick, I. et al., "Maintenance of Data Cubes and Summary Tables in a Warehouse", Proceedings of the 1997 ACM SIGMOD International Conference, ACM Press, 1997, pp. 100-111.

Huyn, N., "Multiple-View Self-Maintenance in Data Warehousing Environments", Proceedings of the 23rd International Conference on Very Large Data Bases, IEEE, (1997), pp. 26-35.

Quass, D. et al., "Making Views Self-Maintainable for Data Warehousing", Proceedings of the Fourth International Conference on Parallel and Distributed Information Systems, IEEE, Dec. 1996, pp. 158-169.

Quass, D. et al., "On-Line Warehouse View Maintenance", Proceedings of the 1997 ACM SIGMOD International Conference, ACM Press, 1997, pp. 393-404.

Gupta, H., "Selection of Views to Materialize in a Data Warehouse", Database Theory-ICDT '97, Proceedings of the 6th International Conference, Delphi, Greece, Jan. 1997, pp. 98-112.

Harinarayan, V. et al., "Implementing Data Cubes Efficiently", SIGMOD Record, vol. 25, No. 2, Jun. 1996, pp. 205-216.

Gupta, H. et al., "Index Selection for OLAP", IEEE Paper No. 1063-6382/97, IEEE (1997), pp. 208-219.

Labio, W. et al., "Physical Database Design for Data Warehouses", IEEE Paper No. 1063-6382/97, IEEE (1997), pp. 277-288.

Gupta, A. et al., "Aggregate-Query Processing in Data Warehousing Environments", Proceedings of the 21st VLDB Conference, Zurich, Switzerland, Sep. 1995, 358-369.

O'Neill, P. et al., "Improved Query Performance with Variant Indexes", Proceedings of the 1997 ACM SIGMOD International Conference, ACM Press, 1997, pp. 38-49.

McAlpine, G. et al., "Integrated Information Retrieval in a Knowledge Worker Support System", Proc. of the Intl. Conf. on Research and Development In Information Retrieval (SIGIR), Cambridge, MA, Jun. 25-28, 1989, Conf. 12, pp. 48-57.

Tsuda, K. et al., "IconicBrowser: An Iconic Retrieval System for Object-Oriented Databases", Proc. of the IEEE Workshop on Visual Languages, Oct. 4, 1989, pp. 130-137.

- "Multiple Selection List Representation Aids Complex Search", IBM Technical Disclosure Bulletin, vol. 36, No. 10, Oct. 1993, pp. 317-318.

ART-UNIT: 271

PRIMARY-EXAMINER: Ho; Ruay Lian

ATTY-AGENT-FIRM: Skjerven Morrill MacPherson LLP Marino; Fabio E.

ABSTRACT:

A method of generating a datamart is described. The datamart includes tables having rows and columns. The method comprises accessing a description of a schema. The schema defines the relationships between the tables and columns. The description further defines how data is to be manipulated and used to populate the tables in the datamart. That is, the description defines the semantic meaning of the data. The description is further used to create a set of commands to create the tables. The commands are executed causing the creation of the tables. Importantly, when the semantic meaning is associated with the column and rows, programs for manipulating and propagating data into those columns and rows are automatically defined. Previously, consultants would have to hand code the creation, manipulation, and population programs for a datamart. Thus, the amount of work required to create and populate the datamart is significantly reduced.

21 Claims, 48 Drawing figures

**WEST**

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Print

L5: Entry 53 of 220

File: USPT

Sep 11, 2001

US-PAT-NO: 6289352

DOCUMENT-IDENTIFIER: US 6289352 B1

TITLE: Apparatus and method for compound on-line analytical processing in databases

DATE-ISSUED: September 11, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Proctor; Anthony Charles	Stowmarket			GBX

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Crystal Decisions, Inc.	Palo Alto	CA			02

APPL-NO: 9/ 087680 [PALM]

DATE FILED: May 29, 1998

INT-CL: [7] G06 F 17/30

US-CL-ISSUED: 707/102; 707/2, 707/100

US-CL-CURRENT: 707/102; 707/100, 707/2

FIELD-OF-SEARCH: 707/101, 707/102, 707/200, 707/100, 707/10, 707/2, 707/3

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5905985</u>	May 1999	Malloy et al.	707/100
<input type="checkbox"/>	<u>5926818</u>	July 1999	Malloy et al.	707/100
<input type="checkbox"/>	<u>5940818</u>	August 1999	Malloy et al.	707/2
<input type="checkbox"/>	<u>5943668</u>	August 1999	Malloy et al.	707/3
<input type="checkbox"/>	<u>5978788</u>	November 1999	Castelli et al.	707/2
<input type="checkbox"/>	<u>5978796</u>	November 1999	Malloy et al.	707/3
<input type="checkbox"/>	<u>5983215</u>	November 1999	Ross et al.	707/2
<input type="checkbox"/>	<u>5983232</u>	November 1999	Zhang	707/102
<input type="checkbox"/>	<u>6003036</u>	November 1999	Martin	707/102
<input type="checkbox"/>	<u>6006216</u>	December 1999	Griffin et al.	707/2
<input type="checkbox"/>	<u>6073140</u>	June 2000	Morgan et al.	707/203
<input type="checkbox"/>	<u>6094651</u>	July 2000	Agrawal et al.	707/5

## OTHER PUBLICATIONS

Codd et al., "Providign OLAP (On-Line Analytical Processing) to User-Analysys: An IT Mandate" (1993).  
Kimball, "The Date Warehouse Toolkit", John Wiley & Sons, Inc., .COPYRGT.1996, pp. 1-19.  
Mattison, "Data Warehousing and Date Mining for Telecommunications", Artech House, .COPYRGT.1997, pp. 211-227.

ART-UNIT: 277

PRIMARY-EXAMINER: Homere; Jean R.

ATTY-AGENT-FIRM: Cooley Godward LLP Galliani; William S.

## ABSTRACT:

A method executed by a computer under the control of a program includes the establishing of a compound structure in the form of a virtual unit of multi-dimensional storage. The compound structure includes a rack with a horizontal arrangement of target structures linked by an alias backbone representing a dimension of information. The horizontal arrangement of target structures selectively includes further compound structures and base structures containing data, in any combination. The compound structure is referenced to obtain information. The method is particularly useful in On-Line Analytical Processing (OLAP).

21 Claims, 10 Drawing figures

**WEST**☐  

L5: Entry 85 of 220

File: USPT

Mar 20, 2001

US-PAT-NO: 6205447

DOCUMENT-IDENTIFIER: US 6205447 B1

TITLE: Relational database management of multi-dimensional data

DATE-ISSUED: March 20, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Malloy; William Earl	Santa Clara	CA		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
International Business Machines Corporation	Armonk	NY				02

APPL-NO: 8/ 885409 [PALM]

DATE FILED: June 30, 1997

## PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS This application is related to the following co-pending and commonly-assigned patent applications: Application Ser. No. 08/885,112, entitled "MAPPING DENSE DATA BLOCKS TO ROWS IN A RELATIONAL DATABASE," filed on same date herewith, by William E. Malloy et al., attorney's docket number ST9-97-005; Application Ser. No. 08/885,696, entitled "RELATIONAL DATABASE IMPLEMENTATION OF A MULTI-DIMENSIONAL DATABASE," filed on same date herewith, by William E. Malloy, attorney's docket number ST9-97-007; Application Ser. No. 08/884,695, entitled "RELATIONAL DATABASE MODIFICATIONS BASED ON MULTI-DIMENSIONAL DATABASE MODIFICATIONS," filed on same date herewith, by William E. Malloy et al., attorney's docket number ST9-97-008; Application Ser. No. 08/885,417, entitled "RELATIONAL EMULATION OF A MULTI-DIMENSIONAL DATABASE INDEX," filed on same date herewith, by William E. Malloy et al., attorney's docket number ST9-97-009; and Application Ser. No. 08/885,410, entitled "ATTRIBUTE-BASED ACCESS FOR MULTI-DIMENSIONAL DATABASES," filed on same date herewith, by William E. Malloy et al., attorney's docket number ST9-97-068; all of which applications are incorporated by reference herein.

INT-CL: [7] G06 F 17/30

US-CL-ISSUED: 707/102; 707/100, 707/3, 707/4

US-CL-CURRENT: 707/102; 707/100, 707/3, 707/4

FIELD-OF-SEARCH: 707/1, 707/2, 707/100, 707/3, 707/102, 707/4, 705/44

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-D	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>5359724</u>	October 1994	Earle	707/205
<input type="checkbox"/> <u>5706495</u>	January 1998	Chadha et al.	707/2
<input type="checkbox"/> <u>5724573</u>	March 1998	Agrawal et al.	707/6
<input type="checkbox"/> <u>5761652</u>	June 1998	Wu et al.	707/2
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<input type="checkbox"/> <u>5848408</u>	December 1998	Jakobsson et al.	707/3
<input type="checkbox"/> <u>5903882</u>	May 1999	Asay et al.	705/44
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<input type="checkbox"/> <u>5978788</u>	November 1999	Castelli et al.	707/2
<input type="checkbox"/> <u>6003036</u>	December 1999	Martin	707/102
<input type="checkbox"/> <u>6122636</u>	September 2000	Malloy	707/102

## OTHER PUBLICATIONS

"Arbor Software and Showcase Corporation Team to Deliver AS/400 Data Warehousing Solution", Business Wire pp. 07310130, Jul. 1996.\*

"One Database for All: Oracle Universal Server Accessses Many Data Types Releases Universal Server with Oracle 7.3 as Relational-Database Component and Web Server Software", CommunicationsWeek, pp. 15, Mar. 1996.\*

"Information Builders Intros "Fusion" MDDS Warehouse", Newsbytes, May 1996.\*

IBM Turns to Arbor Software for Online Analytical Processing and Puts Its Up on Relational Databases, Computergram International, Feb. 1997.\*

"Oracle Trumpets New Databases To Introduce Multidimensional Database Later in 1994", Abstract, Computing Canada, pp. 1, Feb. 1994.\*

"Data Begins Journey to a Multidimension", Computerworld, pp. 57, Jul. 1996.\*

Methaphor Business Series, "Examining Corporate and Syndicated Data", Chapter 3: "Reporter Workshop", 1990, pp. 3-1 through 3-66.

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Kimball, Ralph, "The Data Warehouse Toolkit: Practical Techniques for Building Dimensional Data Warehouses", Appendix D: "User's Guide for Star Tracker.TM.", published by John Wiley & Sons, Inc., 1996, pp. 321-366.

ART-UNIT: 271

PRIMARY-EXAMINER: Black; Thomas G.

ASSISTANT-EXAMINER: Rones; Charles L.

ATTY-AGENT-FIRM: Pretty &amp; Schroeder, P.C.

## ABSTRACT:

A method, apparatus, and article of manufacture for using a relational database management system to support on-line analytical processing (OLAP) systems. A multi-dimensional database is defined using an outline that contains one or more dimensions, each dimension having a list of one or more members. A relational schema is defined based on the defined multi-dimensional database. A relational database is created based on the defined relational schema. The relational database is accessed using access mechanisms provided by the multi-dimensional database and the relational database.

21 Claims, 5 Drawing figures

**WEST**

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L1: Entry 1 of 3

File: USPT

Dec 25, 1984

US-PAT-NO: 4490811

DOCUMENT-IDENTIFIER: US 4490811 A

TITLE: String comparator device system circuit and method

DATE-ISSUED: December 25, 1984

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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APPL-NO: 6/ 331631 [PALM]

DATE FILED: December 17, 1981

## PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATIONS This is a continuation-in-part of Ser. No. 020,518 filed Mar. 14, 1979, now abandoned.

INT-CL: [3] G06F 15/40

US-CL-ISSUED: 364/900

US-CL-CURRENT: 707/5

FIELD-OF-SEARCH: 364/200, 364/300, 364/900

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 4290115	September 1981	Pitt et al.	364/900

ART-UNIT: 232

PRIMARY-EXAMINER: Zache; Raulfe B.

ATTY-AGENT-FIRM: Malin, Haley &amp; McHale

## ABSTRACT:

The string comparator device for comparison of strings of indicia at high speeds for use in a system circuit in a computer system. The string comparison device provides a numeric measurement of the degree of similarity between the compared indicia strings as defined by a mathematical algorithm. The algorithm is solved through a new string comparator device or a new program in a computer system. The system circuit in chip form can be connected in a storage loop of a computer system to locate and quickly extract records that are very similar to the supplied query. Inexact queries will rapidly locate records similar with respect to indicia string related measurements of similarity. The method of indicia string comparison in the improved string comparator device can provide rapid response to queries in a computation time proportional to the average length of the indicia string.

21 Claims, 106 Drawing figures



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File: USPT

Sep 1, 1998

US-PAT-NO: 5802515

DOCUMENT-IDENTIFIER: US 5802515 A

TITLE: Randomized query generation and document relevance ranking for robust information retrieval from a database

DATE-ISSUED: September 1, 1998

## INVENTOR-INFORMATION:

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APPL-NO: 8/ 661591 [PALM]

DATE FILED: June 11, 1996

INT-CL: [6] G06 F 17/30

US-CL-ISSUED: 707/5; 707/3, 707/4

US-CL-CURRENT: 707/5; 707/3, 707/4

FIELD-OF-SEARCH: 707/5, 707/3, 707/4

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>4290105</u>	September 1981	Cichelli et al.	707/5
<input type="checkbox"/>	<u>5404507</u>	April 1995	Bohm et al.	395/600

## OTHER PUBLICATIONS

Wang et al., "LITREF--A Microcomputer Based Information Retrieval System Supporting Stroke Diagnosis, Design and Development", Proceedings. Second Annual IEEE Symposium on Computer-Based Medical Systems, 26-27 Jun. 1989, Minneapolis, Minnesota, pp. 46-51.

Papakonstantinou et al., "Object Exchange Across Heterogeneous Information Sources", Proceedings of the Eleventh International Conference on Data Engineering, 6-10 Mar. 1995, Taipei, Taiwan, pp. 251-260.

"An algorithm for weighted searching on a Boolean system", Bovey et al., Information Technology, vol. 3, No. 2, Apr. 1984, pp. 84-87.

"Annual Progress Report", Library 2000, Jul. 1, 1993-Jun. 30, 1994, pp. 1-8, available on line at: <http://litt-www.lcs.mit.edu/litt-www/Papers/1994.annual.html>.

"On-the-fly Hyperlink Creation for Page Images", Adar et al., Digital Libraries '95 Proceedings, Jun. 11-13, 1995. pp. 173-176.

"Laboratory for Computer Science Progress Report 31", Massachusetts Institute of

Technology, Jul. 1993-Jun. 1994, Library 2000, one unnumbered cover page, second page numbered 3, third unnumbered page, and pp. 154-163.  
"Library 2000 Quarterly Progress Report, Apr. 1-Jun. 30, 1994", Quarterly Progress Report, pp. 1-4, available on-line at:  
<http://litt-www.lcs.mit.edu/litt-www/Papers/1994.4qpr.html>.  
"Probabilistic Methods For Ranking Output Documents In Conventional Boolean Retrieval Systems\*", Radecki, Information Processing & Management vol. 24, No. 3, pp. 281-302, 1988.

ART-UNIT: 237

PRIMARY-EXAMINER: Black; Thomas G.

ASSISTANT-EXAMINER: Lintz; Paul R.

ATTY-AGENT-FIRM: Nutter, McClennen & Fish, LLP Daly, Esq.; Christopher S.

ABSTRACT:

A method and apparatus for randomly selecting terms from an input string to form a plurality of search queries is described. Each of the plurality of search queries can be provided to a database to locate database entries in the database. Database entries returned from a database search using the plurality of search queries may be ordered to provide a relevance ranked list of the database entries.

21 Claims, 4 Drawing figures